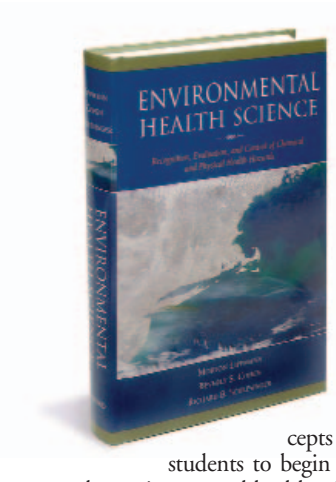

Environmental Health Science: Recognition, Evaluation, and Control of Chemical and Physical Health Hazards

by Morton Lippmann, Beverly S. Cohen, and Richard B. Schlesinger

New York:Oxford University Press, 2003. 540 pp. ISBN: 0-19-508374-1, $65 cloth.

I remember teaching parts of the graduate course at New York University Medical Center that used the original version of this book. Then, as now, the overall text provided basic information on the concepts and principles needed by entering graduate students to begin understanding the complex issues that face the environmental health sciences. Because of the authors' backgrounds, the book's primary focus is human health, as clearly stated in the introduction. Throughout the chapters, however, are many links to the impact of contaminants and their transformation products on ecosystems and other environmental resources.

The chapters focus much attention on air pollution, aerosols, and radiation, again drawing on the experiences of the authors. There are two chapters of note: "The Effects of Contaminants on Human Health" provides detailed insights into the adverse health effects of common air pollutants; "Ionizing Radiation and Environmental Radioactivity" provides a concise and important discussion on the issue. In fact, the latter is one of the best I have seen on radioactivity in a general environmental health text. In contrast, the section on environmental chemistry in "Sources of Contaminants and Transformations to Secondary Products" requires much supplementary material to prepare students for a full course in environmental chemistry (atmospheric or water). "Contaminants of Dispersion" contains a lot of detail on the fundamentals of atmospheric dispersion but much less on water, soil, and food.

Excellent figures and tables placed throughout the chapters help maintain readers' interest and integrate vast areas of environmental and environmental health sciences. Thus, students can appreciate the overall multiple pollutants and multimedia pathway interactions that can occur from source to receptors.

"Risk Assessment" and "Risk Management" are excellent primers for incoming graduate students. The focus is different in each case: The former provides a good discussion of the foundations for hazard assessment and risk characterization. The latter provides excellent sections on the strategies and devices employed to control or eliminate pollutants from one or more sources or media. The chapter "Exposure Assessment," however, is relatively weak, and the flow of the discussion is abruptly interrupted by a discussion on sampling (the latter should be a separate chapter). The end of this chapter provides a short section on exposure modeling. The next edition of the book would truly be enhanced by a separate chapter on environmental and exposure-to-dose modeling; incoming students need to become aware of what is available for modeling.

I have two minor disappointments with the book and one major kudo for the authors. The first disappointment is the lack of any review questions or problems at the end of each chapter. These are essential for reinforcing major points and synthesizing important or complex issues for students. The second is the references listed at the end of each chapter. Although I applaud the richness of references from the 1960s–1970s, the references in many chapters need to be augmented with recent journal articles, books, and several public websites (e.g., www.epa.gov). These would provide students with access to the most recent thoughts, results, and central themes in environmental health sciences. There are some additional references at the end of the book, but except for references on toxicology and radiation, these should be significantly upgraded in a second printing.

In the end, the authors do recover nicely by providing a chapter unusual for a textbook. It is a crystal ball "look at the future issues in environmental health," and the section on the cost and benefits of pollution control (their example is air) is very interesting reading. Although not perfect, the book is a sound basic graduate text that yields insights on the terminology of the field and on complex environmental health issues.

PAUL J. LIOY

Paul J. Lioy is professor and director of the Exposure Measurement and Assessment Division, Environmental and Health Sciences Institute, University of Medicine and Dentistry of New Jersey/Rutgers Medical School, Piscataway, New Jersey.

Advice for a Young Investigator
Santiago Ramon y Cajal; tr. by N. Swanson, L.W. Swanson
Cambridge, MA:Bradford Books, 2004. 176 pp. ISBN: 0-262-68150-1, $18.95

Arctic Ecological Research from Microwave Satellite Observations
Gennady I. Belchansky
New York:Routledge, 2004. 240 pp. ISBN: 0-415-26965-2, $99.95

Cellular Computing: Genomics and Informatics
Martyn Amos
New York:Oxford University Press, 2004. 256 pp. ISBN: 0-19-515540-8, $35

Chemical Engineering Process Design and Economics: A Practical Guide, 2nd edition
Gael Ulrich, P.T. Vasudevan, eds.
Boca Raton, FL:CRC Press, 2004. 776 pp. ISBN: 0-8493-2033-X, $129.95

Cities and Natural Process: A Basis for Sustainability, 2nd edition
Michael Hough
New York:Routledge, 2004. 292 pp. ISBN: 0-415-29855-1, $34.95

Clinical Nephrotoxins: Renal Injuries from Drugs and Chemicals
Marc E. De Broe, George A. Porter, William M. Bennett, Gert A. Verpooten, eds.
New York:Marcel Dekker, 2003. 700 pp. ISBN: 0-8247-0991-8, $195

Clinical Pharmacology and Therapy of *Helicobacter pylori* Infection
C. Scarpignato, G. Bianchi Porro, eds.
Farmington, CT:S. Karger Publishers, 2004. 466 pp. ISBN: 3-8055-7658-7, $271

Coffee, Tea, Chocolate, and the Brain
Astrid Nehlig
New York:Routledge, 2004. 224 pp. ISBN: 0-415-30691-4, $99.95

Echinacea: The Genus *Echinacea*
Sandra Carol Miller, He-ci Yu, eds.
New York:Routledge, 2004. 280 pp. ISBN: 0-415-28828-2, $84.95

Elements and their Compounds in the Environment: Occurence, Analysis and Biological Relevance (3 vols)
Ernest Merian, Manfred Anke, Milan Ihnat, Markus Stoeppler, eds.
New York:Wiley, 2004. 1,600 pp. ISBN: 3-527-30459-2, $635.00

Hepatitis C and B: Management and Treatment, 2nd edition
Thierry Poynard
London:Taylor & Francis, 2004. 176 pp. ISBN: 1-8418-4369-5, $48

Leading Interprofessional Teams in Health and Social Care
Vivien Martin, Anita Rogers
New York:Routledge, 2004. 240 pp. ISBN: 0-415-30793-7, $95 cloth; 0-415-30794-5, $28.95 paper

Local Industrial Clusters: Existence, Emergence and Evolution
Thomas Brenner
New York:Routledge, 2004. 264 pp. ISBN: 0-415-33469-7, $110

Metabolism and Molecular Physiology and *Saccharomyces cerevisiae*, 2nd edition
Richard Dickinson, Michael Schweizer, eds.
New York:Routledge, 2004. 480 pp. ISBN: 0-415-29900-4, $129.95

Molecular Neurotoxicology: Environmental Agents and Transcription-Transduction Coupling
Nasser H. Zawia, ed.
New York:Routledge, 2004. 240 pp. ISBN: 0-415-28031-1, $129.95

Nuclear Waste: A Technological and Political Challenge
Piero Risoluti
New York:Springer, 2004. 133 pp. ISBN: 3-540-40447-3, $99

Polymeric Foams: Mechanisms and Materials
Shau-Tarng Lee, Natarajan S. Ramesh, eds.
Boca Raton, FL:CRC Press, 2004. 328 pp. ISBN: 0-8493-1728-2, $129.95

Radio Wave Propagation and Remote Sensing of the Environment
N.A. Armand, V.M. Polyakov
New York:Routledge, 2004. 384 pp. ISBN: 0-415-31735-5, $109.95

Reviews of Environmental Contamination and Toxicology
George W. Ware, ed.
Heidelberg, Germany:Springer-Verlag, 2003. 126 pp. ISBN: 0-387-00620-6, $153

World Health Report 2003: Shaping the Future
World Health Organization
Geneva:World Health Organization, 2003. 210 pp. ISBN: 92-4-156243-9, $13.50

Arnold Greenwell/EHP